

What is Claimed Is:

1           1.     A building element comprising  
2           a profile extending lengthwise between first and second ends, said profile having  
3           a substantially uniform cross-section defined by a web, a pair of side flanges extending  
4           perpendicular to said web, and outer corners respectively joining said side flanges to  
5           said web, said web having a constriction, a pair of planar segments respectively  
6           disposed on opposite sides of said constriction, and inner corners respectively joining  
7           said planar segments to said constriction, said constriction including a pair of arms  
8           extending angularly inwardly from said inner corners, respectively, to a curved base  
9           having an apex contained in a plane, said planar segments having outer surfaces,  
10          respectively, contained in a plane parallel to said plane of said apex, said side flanges  
11          respectively extending from said outer corners in the same direction as said  
12          constriction to tips, respectively, contained in a plane parallel to said plane of said apex,  
13          said building element having an overall width between said plane of said planar  
14          segments and said plane of said tips, said constriction having a width between said  
15          plane of said planar segments and said plane of said apex about one-third said overall  
16          width.

1           2.     The building element recited in claim 1 wherein said side flanges include  
2           planar portions, respectively, having outer surfaces contained in parallel planes  
3           perpendicular to said plane of said planar segments, and said building element has an  
4           overall height between said planes of said planar portions.

1           3.     The building element recited in claim 2 wherein said constriction is  
2 bisected by a constriction axis perpendicular to said plane of said planar segments and  
3 said constriction axis is centrally located along said overall height of said building  
4 element.

1           4.     The building element recited in claim 3 wherein said overall width is about  
2 one-half said overall height.

1           5.     The building element recited in claim 2 wherein said constriction is  
2 bisected by a constriction axis perpendicular to said plane of said planar segments and  
3 said constriction axis is located along said overall height of said building element so as  
4 to be spaced a distance of one-third said overall height from one of said planes of said  
5 planar portions and a distance of two-thirds said overall height from the other of said  
6 planes of said planar portions.

1           6.     The building element recited in claim 5 wherein said overall width is about  
2 one-fourth said overall height.

1           7.     The building element recited in claim 2 wherein said tips terminate at side  
2 edges and said planar portions respectively extend from said outer corners to said side  
3 edges.

1           8.     The building element recited in claim 2 wherein said planar portions

2        respectively extend from said outer corners to said tips and said tips include end  
3        flanges extending from said planar portions, respectively, outwardly away from one  
4        another.

1            9.        The building element recited in claim 2 wherein said planar portions  
2        respectively extend from said outer corners to said tips and said tips include end  
3        flanges extending from said planar portions, respectively, inwardly toward one another.

1            10.       The building element recited in claim 9 wherein said end flanges extend  
2        linearly from said planar portions, respectively, perpendicular to said planar portions  
3        and parallel to said planar segments.

1            11.       The building element recited in claim 12 wherein said planar portions are  
2        joined to said end flanges by curved outside corners, respectively.

1            12.       The building element recited in claim 1 wherein said arms extend linearly  
2        from said inner corners to said base and define an included angle of about 70 degrees.

1            13.       The building element recited in claim 12 wherein said inner corners are  
2        curved and said outer corners are curved.

1            14.       The building element recited in claim 1 wherein said arms are joined to  
2        said inner corners at junctions, respectively, and said constriction has a height between

3        said junctions no greater than one-fourth said overall height.

1            15.    The building element recited in claim 14 wherein said constriction has a  
2        height of about 4.2 cm.

1            16.    The building element recited in claim 1 wherein said web comprises at  
2        least one additional constriction between said side flanges.

1            17.    The building element recited in claim 1 wherein each of said side flanges  
2        includes an inward protrusion.

1            18.    The building element recited in claim 1 wherein each of said side flanges  
2        includes an outward protrusion.

1            19.    A building element comprising  
2            a profile extending lengthwise between first and second ends, said profile having  
3        a substantially uniform cross-section defined by a web, a pair of side flanges extending  
4        perpendicular to said web, and outer corners respectively joining said side flanges to  
5        said web, said web having a constriction, a pair of planar segments respectively  
6        disposed on opposite sides of said constriction, and inner corners respectively joining  
7        said planar segments to said constriction, said planar segments having outer surfaces,  
8        respectively, contained in a plane, said constriction having a pair of arms extending  
9        angularly inwardly toward one another from said inner corners, respectively, to a curved

10 base having an apex, said constriction being bisected by a constriction axis  
11 perpendicular to said plane of said planar segments, said side flanges respectively  
12 extending from said outer corners in the same direction as said constriction to tips,  
13 respectively, contained in a plane parallel to said plane of said planar segments, said  
14 side flanges having outer surfaces, respectively, disposed in parallel planes  
15 perpendicular to said plane of said planar segments, said building element having an  
16 overall height between said parallel planes of said side flanges and an overall width  
17 between said plane of said planar segments and said plane of said tips, said  
18 constriction axis being located along said overall height a distance of about one-third  
19 said overall height from one of said planes of said side flanges.

1 20. The building element recited in claim 19 wherein said overall width is  
2 about one-fourth said overall height.

1 21. The building element recited in claim 19 wherein said constriction has a  
2 width between said plane of said planar segments and said plane of said apex about  
3 one-third said overall width.

1 22. The building element recited in claim 21 wherein said arms are joined to  
2 said inner corners at junctions, respectively, and said constriction has a height between  
3 said junctions no greater than one-fourth said overall height.

1 23. The building element recited in claim 19 wherein said arms define an

2 angle of about 70 degrees with each of said arms defining an angle of about 35  
3 degrees with said constriction axis.

1 24. The building element recited in claim 19 wherein said tips comprise end  
flanges angled from said side flanges, respectively.

1 25. The building element recited in claim 19 wherein said constriction axis is  
2 located said distance of about one-third said overall height from said plane of a bottom  
3 one of said side flanges.

1 26. The building element recited in claim 1 wherein each of said side flanges  
2 includes a protrusion.

1 27. A building element comprising  
2 a profile extending lengthwise between first and second ends, said profile having  
3 a substantially uniform cross-section defined by a web, a pair of side flanges extending  
4 perpendicular to said web, and outer corners respectively joining said side flanges to  
5 said web, said web having a constriction bisected by a constriction axis parallel to said  
6 side flanges, a pair of web segments respectively disposed on opposite sides of said  
7 constriction, and inner corners respectively joining said web segments to said  
8 constriction, said constriction including a pair of arms extending linearly and angularly  
9 inwardly from said inner corners, respectively, to a curved base with each of said arms  
10 defining an angle of about 35° with said constriction axis.

11           28.    The building element recited in claim 27 wherein said web segments are  
12 planar.

1           29.    The building element recited in claim 27 wherein said constriction axis is  
2 centrally located between said side flanges.

1           30.    The building element recited in claim 27 wherein said constriction axis is  
2 non-centrally located between said side flanges.

1           31.    The building element recited in claim 27 wherein said tips include end  
2 flanges angled from said side flanges, respectively.

1           32.    The building element recited in claim 27 wherein each of said side flanges  
2 includes a protrusion.